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Incented Voluntary Municipal Mergers as a Two-Stage Process: Evidence from the Swiss Canton of Fribourg

Michael A. Strebel*

Abstract

Voluntary mergers of local jurisdictions in Europe gained in importance in the last two decades. A debated but rarely analyzed issue in this field is the impact of different local characteristics on the probability to merge. The paper contributes to this debate by assessing the importance of local determinants in two stages of a merger process. The quantitative study of a large-scale territorial reform in the Swiss canton of Fribourg shows that factors linked to the functional dimension of local government, such as economic hardship, explain the start of a merger process but not the decision taken at the ballots. Here, factors associated with the political dimension of local government, such as political power considerations, offer a better explanation. These findings might be explained by the variation of different political actors' strength along the two stages of a merger process.

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Introduction

In the second half of the 20th century, local government reforms in general – and municipal mergers in particular – have become a major issue on the agenda of national governments and political scientists alike (Wollmann 2010). In many European countries (such as Denmark, Sweden, Germany and the United Kingdom), boundary reforms of local jurisdictions were conducted top-down. Since the 1990s, however, incited voluntary municipal mergers implemented bottom-up have become more frequent (Baldersheim and Rose 2010b, Dafflon 2013, p. 194).

Research on these territorial reforms often adopts a comparative macro perspective with the aim of explaining the different reform trajectories in different local government systems (Baldersheim and Rose 2010c, Kuhlmann and Wollmann 2014). While it is a very promising approach for the explanation of top-down or compulsory mergers, it is less satisfying when applied to incited voluntary municipal mergers. For these cases, the macro- has to be complemented with a micro perspective to assess under which *local* conditions municipalities voluntarily engage in mergers (Ladner and Steiner 2005, Calciolari, Cristofoli and Macciò 2013, Saarimaa and Tukiainen 2014).

Studies investigating mergers in general highlight driving and hindering explanatory factors that can be connected to a functional and a political dimension of local government (Hesse and Sharpe 1991). Large-N or quantitative research predominantly highlights the role of economic determinants linked to a functional dimension of local government (e.g. Sørensen 2006, Blom-Hansen 2010, Jordahl and Liang 2010). More case study-oriented research emphasizes the importance of political factors such as local identification and local political influence (Marcal and Svorny 2000, Silberstein and Soguel 2012, Zimmerbauer and Paasi 2013). The relative influence and importance of these factors during the merger process remains unclear however.

In this paper, I quantitatively investigate a ‘wave’ of incented voluntary municipal mergers that took place in the Swiss canton of Fribourg between 2000 and 2006 with a twofold objective. First, I take on the micro perspective and analyze *which* local structural factors impact merger decisions. Second, analyzing two stages of a merger process (its start and its end), I assess *when* the different local structural determinants matter the most.

Theoretical Background: Explaining Voluntary Municipal Mergers

In this section, I start with an overview of the macro approaches before presenting the Swiss case of Fribourg. Building on existing theories, I then present local level functional and political determinants for voluntary municipal mergers and finally propose an analytical separation of voluntary municipal merger processes into two stages.

Territorial Reforms Across Local Government Systems: Voluntary Municipal Mergers and Higher Tier Incentives

Most research on the causes for territorial reform and municipal mergers in Europe starts out from a macro perspective. It is assumed that higher tier governments play an important role in the explanation of the presence, absence, and design of territorial reform (Kersting and Vetter 2003, Wollmann 2010, Kaiser 2014) and different characteristics of local government systems or national and regional political processes are compared (Baldersheim and Rose 2010b, Kuhlmann and Wollmann 2014). Researchers distinguish, broadly speaking, two reform paths and outcomes, a Northern and a Southern European one. Large-scale municipal mergers resulting in a fundamental restructuration of the local government landscape characterize the Northern European path. The Southern European one, in contrast, consists of cooperative arrangements between municipalities rather than of local boundary modifications (Kuhlmann and Wollmann 2014, pp. 150-52; Hulst and Van Montfort 2007).¹

These variations are linked to different characteristics of local government systems and to the strategies of higher government tiers. Hesse and Sharpe (1991) distinguish three groups of countries with respect to a functional and a political dimension of local government: the Anglo-Saxon, the North-Middle European, and the Southern countries. Local government in North-Middle European and Anglo-Saxon countries is functionally strong: It plays an important role as implementation agent of higher tier policies and enjoys rather high degrees

of local autonomy, while in Southern European countries local government is functionally weak (Vetter 2007, p. 97). Its political strength is high, however, just as in North-Middle European countries and in contrast to Anglo-Saxon ones: Local jurisdictions serve as places for political contestation and as starting points for political careers (Page 1991). Empirically, only countries in which the functional dimension is important have experienced large-scale territorial reforms.

The strategies of higher government tiers² to restructure local government landscapes are an important and proximate factor to explain different outcomes. These strategies can be top-down or bottom-up. All countries or regions in which large-scale territorial reforms took place in the second half of the 20th century (such as the UK, Sweden, Denmark and some German states) followed a top-down strategy. With this strategy, local governments, forced to merge by the higher tier, have almost no voice in determining their territorial fate (Baldersheim and Rose 2010b, p. 6). On the opposite, most Southern European countries³, but also countries and states in which large-scale local boundary reforms are absent such as Switzerland, Austria and some German states (Kuhlmann and Wollmann 2014, p. 151), followed a bottom-up strategy, which implies that local actors *voluntarily* take the decision to merge.

Two kinds of bottom-up strategies should be distinguished, depending on whether mergers are incited by higher tiers or not. Voluntary municipal mergers only occur when there's some form of support from the upper tier (Musilová and Hermánek 2015). Moreover, *administrative support* (e.g. help in legal matters) seems to be a useful supplement but not a sufficient condition to trigger a significant number of voluntary mergers: In local government systems in which a large-scale territorial reform took place bottom-up, a *financial incentive* by the upper tier was in place (cf. Dafflon 2013, p. 218). The nature of financial incentives varies across different systems; some upper tiers relieve merging municipalities from their

debts while others grant lump-sum payments (for a detailed overview see Kaiser 2014). What is important here is that, irrespective of the exact nature of financial incentives, voluntary municipal mergers spread when they are present.

For a quantitative analysis of voluntary municipal mergers one should, thus, investigate a local government system in which the higher tier government pursued a bottom-up strategy with financial incentives for municipal mergers. Only this allows comparing the impact of different local level determinants and for analyzing them quantitatively. I focus on voluntary municipal mergers in the Swiss canton of Fribourg – a case in which a large-scale territorial reform took place bottom-up.

The ‘Merger Wave’ in the Swiss Canton of Fribourg

Between 2000 and 2006, the canton of Fribourg experienced an unprecedented ‘wave’ of voluntary municipal mergers. More than half of all municipalities (135) started a merger process and a large amount of them (105) merged successfully in the end. From 245 by the end of 1999, the number of municipalities dropped to 168 by the end of 2006: 77 municipalities disappeared from the cantonal map. While some voluntary mergers occurred between 1990 and 2000 and have occurred in recent years, the pace cannot be compared to this large-scale territorial reform experience (see figure 1).

FIGURE 1 About Here

Why did such a vast amount of voluntary mergers occur in this relatively short time period? The answer lies in a temporally limited financial incentive provided by the cantonal government that was not present before or after this period. With the aim of encouraging municipal mergers during a limited period of time (2000-2006), the parliament of the canton passed a decree in 1999 introducing lump-sum payments for merging municipalities (Great Council of the Canton Fribourg 1999). More precisely, each municipality that merged during

this period received CHF 400 (~ \$ 270 at the time) per inhabitant weighted by its financial capacity.⁴ A fund was created to finance these payments. Local governments had to contribute 30% to this fund; the remaining 70% were paid for by the canton. Together with the transparent way of calculating the lump-sum payment and the pressure exerted by the temporal limitation of the decree, this substantial contribution on the part of the municipalities might have constituted an additional incentive: Merging then meant getting the lost money back with a little ‘bonus’. This incentive structure allowed for the rare event of a large-scale territorial reform that is not based on compulsion.⁵

Fribourg’s local government landscape at the beginning of the new millennium was very fragmented and small-scaled, even compared to other Swiss cantons: The average municipality had 954 inhabitants compared to a Swiss average of 5594. Apart from this divergence, the canton of Fribourg can be considered as rather representative of other Swiss cantons (see table 1). Both its population- and its area size lie within the standard deviation of other Swiss cantons, as well as its population density and the percentage of the settlement area.

TABLE 1 About Here

Fribourg is, however, a bit less urbanized than other cantons. Historically a rural canton, its suburbanization began in the 1970s and 1980s in the course of a general movement of people from the cities to the countryside (Kübler 2007). In 2000, Fribourg represents a canton with a suburban local government structure that still has rural elements. My analysis thus investigates voluntary municipal mergers among suburban jurisdictions, little examined compared to mergers between center cities and suburbs (Feiock and Carr 2000, Savitch and Vogel 2004). The determinants for these two types of mergers do not differ, however, apart from the lower salience of a center-periphery dimension in mergers among suburban territories (cf. Dur and Staal 2008, Jakobsen and Kjaer 2015).

Fribourg local governments – like local governments in all Swiss cantons – are strong both in functional and political terms. On the functional dimension, municipalities have a dual role as implementation agents of cantonal (and federal) policies and as self-governed and autonomous units. In 2000, they accounted for around 30 percent of overall public expenditures in Switzerland (Ladner 2010, p. 217). On the political dimension, citizens enjoy a wide range of participation rights in local politics. They elect the local executive – a mayor plus councilors – and (depending on the municipality) a local parliament. When there is no local parliament, citizens participate directly in municipal assemblies, namely town hall meetings, with rights equivalent to those of municipal parliaments. In addition, citizens have the opportunity to participate in local politics via referenda and other direct democratic means (Ladner 2010). The final decision on a merger is always subject to a popular referendum.

In the Hesse and Sharpe (1991) classification, Switzerland, and thus the canton of Fribourg, belongs to the North-Middle European group. Generally, countries and states in this group follow the Northern path to territorial reform – top-down and compulsory. While the outcome it achieved fits the Northern European type (large-scale territorial reform), the canton followed a Southern European reform strategy (inducement of bottom-up voluntary mergers). The linguistic structure of Fribourg (see methods section) limits generalization to very specific conditions. Yet, when a financial incentive is present, voluntary municipal mergers might spread equally in cases belonging to the North-Middle European group without a Northern reform strategy, such as Austria, Japan, Finland, as well as some German states (Kuhlmann and Wollmann 2014, Saarimaa and Tukiainen 2014).

The Role of Local Structures: Functional and Political Determinants for Voluntary Municipal Mergers

The present paper investigates the local determinants influencing the probability to merge and the structural conditions under which municipal mergers occur. Since debates on

municipal mergers use to oppose economic or functional reasons and political reasons for mergers (Austin 1998), I focus my analysis on different determinants that I link to a functional and to a political dimension of local government. While municipal mergers can enhance the functional performance of local governments, i.e. their “system capacity”, they can threaten the political dimension, e.g. the “effective participation” of local constituencies (Dahl and Tufte 1974). Other factors, such as actor constellations and actor strategies within municipalities also play an important role in the explanation of municipal mergers (Mévellec 2009). Yet, analyzing these determinants would require an in-depth study of the different municipalities, which lies beyond the quantitative scope of this paper.

The Functional Dimension – Fiscal Stress & Population Size

An important finding of research on voluntary municipal mergers is that small municipalities and municipalities under fiscal stress are more likely to engage in mergers (cf. Ladner and Steiner 2005, p. 250; Calciolari, Cristofoli and Macciò 2013; p. 580, Musilová and Hermánek 2015). In this part, I propose two hypotheses that take up this finding.

In their simultaneous function as service providers for local constituencies and as implementation agents of higher tiers’ policies, municipalities are under strain from two sides. From above, higher government tiers demand output in the form of good policy implementation: Growing requirements in terms of implementation quality are complemented by an increasing number of tasks that have to be handled at the local level – as a result from decentralization and devolution tendencies (Denters and Rose 2005, Hulst and Van Montfort 2007, p. 3).

From below, municipalities face demands from their constituencies to provide satisfying levels of public services (Bhatti and Hansen 2011, p. 214). In most countries, local government is involved in the provision of important welfare state services and “it [...]”

affects, to a greater or lesser extent, the everyday lives of all citizens” (Page 1991, p. 1). Residents, thus, have a strong interest in high-quality local public services and local governments increasingly perceive them as passive *consumers* of local politics rather than as active *citizens* participating in politics (Andrew and Goldsmith 1998, Loughlin, Hendriks and Lidström 2011). In line with this, citizens’ expectations vis-à-vis local government have considerably increased in the last decades and public services are demanded at an ever higher standard (Steiner 2002, p. 243). Coping with these demands requires a significant amount of economic resources. But what if these resources are not available?

A prominent answer is *institutional reorganization* to benefit from scale economies. Two possibilities are discussed in the literature: inter-municipal cooperation and municipal merger (Baldersheim and Rose 2010b, p. 18). A municipality can cooperate with its neighbors to provide a certain public service (Hulst and Van Montfort 2007, p. 6; Swianiewicz 2010, p. 185) and, thus, increase scale economies and reduce negative externalities (Dur and Staal 2008, Dafflon 2013, p. 193). The flipside of this strategy is a loss of democratic control over the respective services (Rakar, Ticar and Klun 2014), even though the municipality remains an autonomous political entity.

A municipality can also merge with one of its neighbors to tackle its problems. The trade-off here is a different one: Instead of losing democratic control over *one* policy, a municipality loses a certain amount of democratic control over *all* policies by giving up its status as an autonomous political actor. Merging thus appears as a viable and ‘rational’ strategy when a municipality faces problems in many different policy fields (Soguel 2006). Rather than having separate cooperation institutions in each policy area, it is more convenient to reconcile them in one integrated body. Since a shortage in economic resources mostly affects several areas of local politics, my first hypothesis reads as follows:

H_{1a}: A municipality under fiscal stress is more likely to merge than an economically wealthy one.

Small municipalities face challenges similar to poor ones. As indicated above, bigger size means lower unit price when it comes to the provision of many public services. Small municipalities, therefore, frequently suffer from diseconomies of scale (Sørensen 2006), which increases their probability to merge. Yet, population size can also have an impact on the probability to merge via another path. Every municipality needs engaged citizens but small municipalities frequently experience difficulties in finding willing and capable people to occupy positions such as mayor or local executives (Musilová and Hermánek 2015). This can be particularly difficult in suburban settings. Commuters are not necessarily oriented towards their place of residence, but more towards a whole region or a center near-by (Lidström 2013), and they are generally less willing to engage in local politics. Merging can contribute to solve this problem: Bigger municipalities have fewer public positions per capita, and they become more attractive because the “system capacity” (Dahl and Tufte 1974) grows and public office, hence, entails a bigger power share. Therefore, the second hypothesis for the functional dimension reads as follows:

H_{1b}: A small municipality is more likely to merge than a bigger one.

The Political Dimension – Local Identity and Political Power

Local governments do not only provide public services and guarantee the welfare of their residents (Page 1991, p. 1), they also have important political functions. In systems with politically strong local governments, citizens can participate in various political procedures and decide on a number of political issues on the local level (Kuhlmann and Wollmann 2014). Municipalities are the institutionalized territories within which citizens' local political preferences are aggregated (Oliver 2001). Merging implies a modification of local boundaries, and consequently a redistribution of political power. This can lead local constituencies to oppose mergers (Baldersheim and Rose 2010a, p. 234). Two factors on the political dimension are frequently mentioned as hurdles to municipal mergers: Local identity and political power.

Local identity has many different facets and scholars differ quite substantively in their approaches to identity (see Brubaker and Cooper 2000 for an overview). In this paper, I confine the analysis to one individual and one collective aspect of local identity⁶: local place attachment and local political culture (cf. Paasi 2003, 478). Local place attachment designates a feeling of belonging to one's local community and jurisdiction that "is considered an important prerequisite for individual civic and political engagement in the municipal context" (Bühlmann 2012, 150). This feeling of belonging needs time to evolve (Manzo 2003, 49) but once established, local place attachment is a long-lasting and stable personal trait (Lewicka 2011). A merger is disruptive to local place attachment, because it transforms important objects an individual can identify with, such as the name, flag, or political institutions of a municipality (Silberstein and Soguel 2012), along with local boundaries and can thus face substantial resistance (Baldersheim and Rose 2010a, p. 242-243).

Only few studies analyze such claims empirically. In a survey on support for municipal detachment in Los Angeles, Marcal and Svorny (2000) find that individuals with strong

community ties report lower support for detachment. In an ex-post survey on a municipal merger in the Swiss Canton of Fribourg, Silberstein and Soguel (2012) find that strong attachment to the former municipalities decreases retrospective merger acceptance. Zimmerbauer and Paasi (2013) investigate a municipal merger in Finland and find a strong conflict between supporters and opponents of a municipal merger that revolves around local identities. These similar findings across different local government contexts suggest that strong local place attachment of individuals can indeed represent an obstacle to municipal mergers, especially if mergers are subject to popular referenda as they are in Fribourg.

The second aspect of local identity refers to more collective features that I term local political culture. This can be conceived as a shared set of beliefs and values about what local government is and what it is supposed to be (Kincaid 1980). These beliefs vary across different contexts and different local government systems (Stoker 2011) and they manifest themselves in manifold ways. For instance, in some local government systems, participation in local politics is deemed more important than in others: “Localized” can be distinguished from “delocalized” systems of local government (cf. Sellers et al. 2013, p. 426). Further, the politico-institutional structure of local government – whether it is a representative or a direct-democratic, a strong mayor or a committee system and how different levels of government interact – impacts the kind of values that are shared (cf. Kuhlmann and Wollmann 2014). In a direct-democratic system, to give but one example, the value of local autonomy and self-government is deemed more important than in a representative system, and accordingly local political culture is more localized. A localized political culture can hamper municipal mergers: The local level is attributed more importance than in a less localized setting, and municipal mergers can thus be perceived as a potential threat to local autonomy and local democracy (Boudreau 2003, p. 194).

Combining these two aspects of local identity leads to a third hypothesis:

H_{2a}: The stronger local place attachment and the more localized political culture are in a municipality, the less likely it is to merge.

A second factor that needs to be considered for the political dimension of local government is political power. Merging changes the existing power distribution in a given territory. A social group that was dominant before a merger can become a numeric minority after consolidation (cf. Savitch and Vogel 2004). Dur and Staal (2008) argue that municipal mergers can create a situation in which the larger of two municipalities exploits the smaller one: The larger municipality can use the – now joint – public revenues to provide public services, e.g. infrastructure, in its own part of the new municipality only. This creates a disincentive to merge with larger municipalities. Moreover, Jakobsen and Kjaer (2015) find that after a merger of municipalities with a large population differential, the priorly smaller municipalities are over-represented in local councils. They argue that this is due to stronger mobilization motivated by the fear of being overruled by the larger parts. We can, thus, expect that the fear of being overruled leads small municipalities to refrain from merging with large ones in the first place:

H_{2b}: The smaller the population of a municipality compared to its potential partners, the less likely it is to merge.

Alternative Explanations

While the presented factors are important for explaining municipal mergers, they are not exhaustive. I briefly discuss some alternative explanations. First, the *geographical conditions* a municipality is rooted in have to be taken into account. Geography depicts a “natural constraint” for a municipality to engage in a merger (Bhatti and Hansen 2011, p. 215). For instance, it might matter whether a municipality has two or whether it has ten neighbors – i.e. potential merger partners – to engage in a merger with. The latter

municipality can choose among many more potential partners than the former (Steiner 2002, p. 247). It is, thus, important to control for the number of neighbors a municipality has.

Second, differences in local institutional structures can be important for municipal mergers. A first institution to consider is inter-municipal cooperation. As mentioned in the argument for H_{1a} , merging and cooperating can be seen as different paths to achieve the same goal (Baldersheim and Rose 2010b, p. 18; Kuhlmann and Wollmann 2014, p. 151). In this logic, a municipality that took the path of inter-municipal cooperation is less likely to switch path and merge than a municipality that has not chosen a certain path yet. Unfortunately, for the case at hand, systematic data on inter-municipal cooperation is not available and its impact cannot be tested in the analysis. While this is a shortcoming, it does not severely obstruct the analysis. On the one hand, inter-municipal cooperation in Switzerland is indeed very widespread: A survey of local councilors shows that nearly all municipalities – even big cities – cooperate with their neighbors and that the extent of cooperation is independent of municipality size (Steiner 2003, p. 558). Accordingly, I assume that the municipalities under scrutiny are involved in inter-municipal cooperation to a similar extent. On the other hand, the inclusion of inter-municipal cooperation is highly relevant for an analysis of who merges with whom, but less so for the present analysis of *whether* a municipality merges or not.

A second important institutional feature in the Swiss context is the distinction between parliamentary and assembly municipalities (Ladner 2010). While in the first type a permanent elected legislative exists in addition to the executive, in the second type the legislative function pertains to the municipal assembly, a town hall meeting where citizens gather and take decisions. In both types, far-reaching political decisions – such as municipal mergers – are subject to local referenda. Nevertheless, municipalities with a parliament might be more prone to merge because they already function in a representative logic, while some smaller

municipalities might be reluctant to abandon their popular assemblies. Therefore this factor is included in the analysis.

Voluntary Municipal Mergers as Two-Stage Processes

A question that remains largely unexplored in research on voluntary municipal mergers is *when* the different determinants listed above come into play in the course of a merger process. Municipal mergers are normally analyzed as singular events: A municipal merger is the moment in which some local jurisdictions disappear and another local jurisdiction comes into being. This moment can be pinned down very clearly. Existing quantitative investigations of municipal mergers do so by focusing on successful mergers only. A binary distinction is made between municipalities that merged and those that didn't (e.g. Ladner and Steiner 2005, Bhatti and Hansen 2011). This strategy has a substantial shortcoming: It cannot assess the determinants of preceding decisions and it fails to explain unsuccessful merger attempts (Dafflon 2003, p. 10). The municipalities that merge in the end are only a subsample of those who attempted to merge, and looking at successful mergers only might lead to erroneous conclusions about the factors driving these events.

Only few scholars make propositions to distinguish different stages of merger processes. Dafflon (2003, pp. 11-12) identifies three stages of voluntary mergers: A preliminary, a preparatory and an institutional stage. In the first two stages, negotiations between the different municipalities take place and the terms and the perimeter for the merger are defined. In the last stage, the citizens decide at the ballots whether they accept the merger proposal or not. Soguel, Beutler and Lécho (2005, p. 4) differentiate four different stages: Preliminary analysis, strategic analysis, operational analysis and implementation. Again, the first three stages involve negotiations among political and administrative actors of the different municipalities while in the fourth stage the referendum on whether or not to merge

is held. Finally, in a study of city-county consolidations, Feiock and Carr (2000, p. 228) suggest to analyze two stages of merger processes. In the first stage, the issue is put on the political agenda; in the second stage, a referendum on the reform is held.

Because of the quantitative set-up and the lack of more detailed data (see methods section), the fine-grained distinction into three or four stages as suggested by some authors cannot be reproduced here. For the second objective of this paper – to investigate whether and how the impact of different factors varies during a merger process – I build on the two stage distinction proposed by Feiock and Carr (2000).

The two stages of merger processes are thus its start, and its end. This distinction keeps complexity relatively low compared to a more fine-grained distinction, but is sufficient to assess whether the relevance of different factors changes in the course of a merger. If no differences are found with this rough distinction, it is also unlikely to find them with a more fine-grained distinction involving more stages.

Methods

In this section, I start by discussing the dependent variables (start and end of a merger) and the data at hand. I then describe the operationalization of the independent variables, namely fiscal stress, population size, local place attachment, local political culture and political power. Finally, I explain my choice of a cross-sectional model instead of a longitudinal one.

Dependent Variables – The Start and the End of a Merger

As discussed in the previous section, a municipal merger should not be treated as an event that occurs at one point in time but as a dynamic process whose different steps should be analyzed. In my definition, a municipality was involved in a merger between 2000 and

2006 if a merger proposal appeared in administrative documents during that time. This appearance corresponds to the start of the process. In the Swiss canton of Fribourg, all municipalities submit their merger proposals to the cantonal government, which has to formally approve it. In my analysis, this submission depicts the start of a merger process.⁷ The first binary outcome variable in the dataset distinguishes between municipalities that *submitted* a merger proposal to the cantonal government, and, thus, made a merger attempt, and those that did not.

This indicator doesn't contain any information about the success or failure of the project. That piece of information comes from the second stage, namely the end of a merger process. This stage corresponds to a municipality's final decision on the merger and is empirically measured via the outcome of the local referendum. In the canton of Fribourg, mergers need the approval by local referenda in all involved municipalities and the final decision lies with local constituencies.⁸ The second dependent variable, thus, consists of a binary distinction into municipalities deciding in favor and those deciding against merging, and is cast at the ballots. Put differently, it distinguishes municipalities that *accepted* from those that did not accept a merger.

Independent Variables – Fiscal Stress, Population Size, Local Identity and Political Power

A list of descriptive statistics for all variables, grouped by the two dependent variables, can be found in tables A.1 and A.2 in the appendix. In what follows, I discuss the operationalization of the main independent variables.⁹

Functional Determinants

Fiscal stress: Two indicators are used to assess the economic situation of a municipality. The first is the financial capacity index. It is used by the Fribourg

administration to determine the fiscal strength of the canton's municipalities, and mainly serves as the calculation base for the grants from intra-cantonal fiscal equalization (Mischler 2009, pp. 158-60). There are two separate elements to the financial capacity index: Local fiscal resources and local financial needs (Great Council of the Canton Fribourg 1989, Art. 3-8). For each of these indicators, a mean value that depicts the index mean of 100.00 is calculated. All the municipalities are then assigned values below or above 100.00 corresponding to their values on these indicators. Index values above 100.00 indicate above-average capacity. While this indicator measures structural features of a municipality's situation, it does not account for its legacy. High expenditures in the past might also lead to fiscal stress, even though the tax base is solid. Therefore, in addition to the financial capacity index, a municipality's net indebtedness per capita will be used as a second indicator to account for this.

Population Size: Population size is measured as the number of inhabitants that lived in a municipality in the year 1999. The natural logarithm is taken to normalize the distribution of this variable.

Political Determinants

Local Identity: Measuring the attachment of an individual to groups, institutions or territories is a challenging task (Lewicka 2011). Measuring the feelings of belonging of a *whole* municipality is even more difficult and can only be approximated, especially in the absence of survey data. Considering that the duration of residence was found to be a good predictor of local place attachment in numerous studies (Kasarda and Janowitz 1974, Lackwoska and Mikula 2015, Magre, Vallbé and Tomàs 2016) (after four to six years of living in one place, local place attachment increases significantly (Magre, Vallbé and Tomàs 2016)), I use the percentage of residents living in a municipality for five years or longer in the year 2000 to approximate citizens' attachment to their municipality.

In order to distinguish between more and less localized political cultures for measuring the collective aspect of local identity, I leverage a specific feature of the canton of Fribourg: Its bilingualism. Fribourg is one of the few Swiss cantons that are bilingual, i.e. consist of French- and German-speaking parts, and municipalities can be unambiguously assigned to one or the other language. This feature is useful because the Swiss French and the Swiss German culture differ in the ways different government levels are perceived (Meier-Dallach and Hohermuth 2003). The Swiss French culture is more oriented towards the cantonal level, whereas the Swiss German one emphasizes the role of the local level as well. Further, in the Swiss French part, representative democracy is more important than in the Swiss German part (Ladner 2010, p. 213). In a representative culture, citizens are often less involved and engaged than in a direct-democratic culture, which can explain the lower importance of the local level. I thus take German-speaking municipalities to display a more localized political culture than French-speaking ones, assuming that this collective aspect of local identity is stronger in the former.

Political Power: For the first stage of a merger, political power is measured as the ratio of a municipality's population size and the average population size of potential merger partners (=neighbors). Because we do not know which municipalities become partners before the start of a merger, the average of the neighbors is the most reliable indicator. For the end of a merger, political power is measured as the ratio of a municipality's population size and the size of the new municipality. In addition, a dummy variable is included: It measures whether a municipality would be incorporated (if it is much smaller than the main municipality), would amalgamate (if all municipalities are approximately the same size), or would incorporate others (if it is much bigger than the other municipalities). This variable captures not only the relation between a municipality and the total of the others, but also its role in a merger.

Modeling – Cross-Sectional Logistic Regression Analysis

Two separate logistic regression models investigate the impact of the different determinants cross-sectionally. This choice of methods might seem surprising, since the second aim of the paper is to investigate different subsequent stages of a merger and the data thus display a temporal dimension. Yet, this choice can be justified on different grounds.

Standard time-series or panel analysis procedures are not suitable for this type of data, since observations drop out in the course of time. This problem could be handled by event history models (Box-Steffensmeier and Jones 2004), but these models have their own requirements, which are not reconcilable with the case at hand. Most importantly, one of the two investigated outcome variables, namely starting a merger, cannot be pinned down to one point in time. A municipality can be involved in a merger for more than one time period, e.g. a year, which would then lead to an over-estimation of the effects of certain characteristics. Second, a newly created municipality joining the dataset at time t is non-independent from disappearing municipalities at time $t-1$, if the latter formed the new municipality. While there are possibilities to account for within-unit temporal dependencies, there is no obvious solution for *between*-unit temporal dependencies (Box-Steffensmeier and Jones 2004, pp. 114-16). Finally, event history analysis requires longitudinal data. However, such data is not available for all the needed indicators.

Due to these limitations, I selected a cross-sectional modeling strategy. The year 2000 serves as the base year for all the independent variables. The variable ‘merger attempt’ measures whether a municipality was involved in a merger *during the period 2000-2006*, and the variable ‘merger acceptance’ measures whether an involved municipality accepted the merger in this period at the ballots. Such a proceeding certainly can be criticized on various grounds. Yet, it is justifiable by two arguments. First, in substantive terms, this paper does not aim at explaining *when* an event occurred during the six-year period but only *whether* it

occurred. Second, it focuses on structural indicators that do not vary a lot over such a short time period. In this sense, the census data from 2000 can be considered as depicting a *snapshot* of the longitudinal picture. A longitudinal correlation analysis of indicators for which longitudinal data was available supports this claim: The year 2000 can serve as a proxy for other years as well.¹⁰ Therefore, these structural indicators could be considered as time-invariant covariates, which would render a longitudinal analysis obsolete.

Logistic regression models are estimated for the two binary outcome variables (cf. Long 1997, pp. 53-54). The model for the first outcome variable, ‘merger attempt’, includes all municipalities that existed in the canton of Fribourg in the year 2000. The model for the second outcome variable, ‘merger acceptance’, includes only the municipalities with a positive outcome in the first outcome variable – namely those that attempted to merge. The units of analysis for the second outcome variable are thus a subsample of those for the first one.

Results

This section is divided into two parts. In the first one, I assess the impact of functional and political determinants for the probability to start a merger. I then analyze which of these factors are associated with a successful merger.

Attempting to Merge

Recall the four hypotheses that will be tested: The first two hypotheses, H_{1a} and H_{1b} , state that functional pressures, i.e. fiscal stress and small population size, render a merger attempt more likely. The second two hypotheses H_{2a} and H_{2b} assume that political determinants, i.e. local place attachment and localized political culture as well as power considerations, render it less likely.

Table 2 depicts different models that assess the probability to start a merger. It includes a baseline model with control variables only, two separate models for the functional and the political hypotheses and a full model integrating all predictors.

TABLE 2 About Here

Neither the number of neighbors nor parliamentary representation has a significant impact on the probability to start a merger in the full model. On the contrary, financial capacity, debt / capita and population size significantly impact the probability to merge in the expected way. Low financial capacity and a small population size increase the probability to make a merger attempt, while a lower debt / capita increases it.¹¹ However, in the full model, when political determinants are included, this indicator is not significant anymore.

The results for the political determinants are less straightforward. The indicator for local political culture, namely language, has a strong impact on the probability to start a merger. In line with my expectations, German-speaking municipalities are much less likely to start a merger than French-speaking ones. But the coefficients for the share of long-term residents on the total population and the population size of a municipality compared to its neighbors are not very robust. Against initial expectations, a higher share of long-term residents positively impacts the probability to start a merger – but this effect is not significant in the full model. The effect for the population ratio is in line with theoretical expectations, but it is only marginally significant in the full model. Comparing the pseudo- R^2 s of the functional and the political models, one can see that the functional model performs slightly better at explaining the outcome. But as the pseudo- R^2 from the full model shows, it is the combination of both functional and political determinants that delivers the best results.

The most important results of the full model are summarized graphically in figure 2. It shows the predicted probabilities to start a merger for different levels of financial capacity

and population size in the two language contexts, holding all other variables constant at their mean.

FIGURE 2 About Here

The figure highlights strong differences between German- and French-speaking municipalities. A German-speaking municipality is nearly 40% less likely to make a merger attempt than a French-speaking one. The effects of financial capacity and population size are roughly the same across the two groups. A municipality from the smallest quartile has a 20% higher chance to start a merger than a municipality from the largest quartile. Financial capacity has a similarly strong effect for the French-speaking municipalities, but a bit less so for German-speaking municipalities.

In line with hypotheses H_{1a} and H_{1b} , poor and small municipalities are more likely to make a merger attempt than wealthy and large ones. Furthermore, local political culture strongly determines the probability to start a merger, which corroborates part of H_{2a} .

Accepting a Merger

Are the effects of the different indicators similar when a merger ends? Table 3 shows the different logistic regression models to assess the decision taken at the ballots, for which the control variables are not included anymore. The number of neighbors does not matter at this stage because partners are already found, and there is only one municipality with a parliament in the subsample for this stage, which leads to the exclusion of these variables.¹² To gauge size differences between different municipalities, two additional variables are included: Whether a municipality would be amalgamating (a merger among equally sized municipalities), or whether it would be incorporating other municipalities (i.e. dominate the new municipality in terms of population size).

TABLE 3 About Here

In contrast to the first stage, functional determinants appear to be less important. Only population size still has a significant and negative effect on accepting a merger at the ballots. Fiscal stress does not seem to be linked to the outcome of local referenda on mergers and H_{1a} has to be rejected for this stage.

Again, the results for the political determinants are less straightforward. In contrast to table 2, the indicator for local political culture is not significant anymore. Neither is the variable that distinguishes amalgamating from incorporating and incorporated municipalities. The sign of the indicator for local place attachment is in line with theoretical expectations but only significant in the full model. The opposite is true for the population ratio: It is significant only in the political model, but the sign contradicts the theoretical expectation from H_{2b} . This could be explained by the fact that it captures part of the effect of population size. The inclusion of the latter renders the population ratio insignificant, and these two variables are quite strongly correlated.¹³ Finally, the political and the full model show a significant and positive effect on the probability to accept a merger for municipalities that incorporate other municipalities, which is in line with H_{2b} . The goodness-of-fit statistics of the different models show that the full model has a much higher pseudo- R^2 than the political model and that the political model is not significant. Further interpretation should, thus, not rely too much on the political model.

Figure 3 summarizes the most important determinants from the full model graphically. It visualizes an interesting finding: An increase in population size and in the share of long-term residents only negatively affects the probability to accept a merger in municipalities that would amalgamate or be incorporated by others, but not in those that incorporate others. Furthermore, the negative effect of population size is stronger for municipalities with a higher share of long-term residents.¹⁴ These findings at least partially corroborate H_{1b} , H_{2a} and H_{2b} .

FIGURE 3 About Here

Discussion: Explaining Voluntary Municipal Mergers as Two-Stage Decisions

The results show that both functional and political considerations matter for voluntary municipal mergers. However, these different factors vary in their importance over the course of a merger. While fiscal stress and local political culture matter for starting a merger process, local place attachment and power considerations influence its success or failure. Only population size has a significant negative effect on the probability of attempting to merge *and* accepting a merger.

A possible explanation for these findings is that different actors play the dominant role in the two stages of a merger process. The decision to start a merger lies in the hands of local elites; starting a merger is predominantly a negotiation process among local elected officials (Ladner and Steiner 2005, p. 251). In Switzerland, usually it's the local executives who get into contact with one another to start a merger process. In their day-to-day experience, local elites are frequently confronted with the lack of local resources and they are sensitive to 'technocratic' solutions that promise to reduce fiscal stress (Boudreau 2003). Discourses on municipal mergers highlight their potential for enhancing economies of scale and reducing demographic pressures (Kuhlmann and Wollmann 2014, pp. 169-71). Further, local elites also represent a certain local culture. When this local culture ascribes less importance to the local compared to other levels of government, as it is the case for the French-speaking municipalities in Switzerland, representatives might be more prone to consider a merger as a solution for local fiscal and demographic pressures. However, the findings only show weak evidence for the role of power considerations in starting a merger. This is a surprising result in the light of research that highlights the role of local elites' power considerations in territorial reforms (Savitch and Vogel 2004, p. 762). Here, a deeper analysis is due, which, however, lies beyond the scope of this paper.

The end, i.e. the final acceptance, of a merger is subject to a local referendum. Here, the dominant actors are the citizens of the affected jurisdictions deciding at the ballots. The results suggest that they base their decision on slightly different reasons compared to elected officials. Power considerations seem to matter particularly. Citizens in municipalities that would incorporate other municipalities do not oppose this reform, in contrast to citizens in municipalities whose merger would lead to ‘co-dominion’ or to being ‘subordinate’ to another municipality. This can be explained by a fear of losing power and voice (Jakobsen and Kjaer 2015), and is in line with research that highlights the importance of representative and participatory aspects in citizens’ evaluation of local democracy (Denters 2014 , p. 162). Local place attachment also only appears to impact the decision in municipalities that would amalgamate or would be incorporated. This result suggests that individuals’ local place attachment becomes salient in situations in which they could lose out.

Finally, the findings for the effect of population size on the acceptance of a merger point to potential trade-offs that exist between functional and political factors. Figure 3 shows that local place attachment only produces a strong negative effect once a municipality exceeds a certain size. A possible explanation for this result is that citizens in small municipalities give more weight to the functional pressure (and its potential solution through a merger) than to their local place attachment. The awareness of these functional pressures might also be reinforced by the frequent interactions between local elites and citizens in small jurisdictions (Oliver 2000). When the size increases, functional pressures are reduced and there is more room for political considerations.

In sum, the results suggest that it is important to disentangle different decision stages in the course of a merger. Different paths might lead to the decision to start and to successfully end a merger: Functional determinants are predominantly linked to the probability of starting a merger, while political determinants play a role for both starting and ending a merger.

Distinguishing between merger attempts that failed and those that succeeded allows for additional insights in local government mergers which remain concealed to studies distinguishing only between merged and non-merged municipalities. It offers a new perspective on voluntary municipal mergers and draws a more nuanced picture of the different structural determinants and their respective relevance.

Conclusion

In research on local territorial reforms there's a dearth of studies investigating the local determinants for voluntary municipal mergers and even less is known about their impact in different stages of a merger. This study is a first attempt to fill this gap. I investigate a large-scale territorial reform of incented voluntary municipal mergers that took place in the Swiss canton of Fribourg between 2000 and 2006 and analyze which functional and political determinants render the start and the successful end of a merger process more or less likely.

The results suggest that different paths might lead to these two different outcomes. Functional factors appear to be especially relevant for starting a merger process, and they could be understood as triggers (Calciolari, Cristofoli and Macciò 2013, p. 580). In contrast, political factors especially play a role at the end of the process, when the final decision on the merger is taken. These differences could be explained by the varying importance of different actors and their distinctive rationales or mindsets (cf. Boudreau 2003). At the outset of a merger process, local elites – representatives and officials – dominate the process, while the final decision is taken at the ballots by the citizens.

These findings have important implications for the discussion on municipal mergers. First, they indicate that local constituencies are not only consumers of local services, but that they especially value the political dimension of local governments. This corroborates a recent finding by Denters (2014) for the Dutch case. Second, the Swiss canton of Fribourg is a good

example for the efficacy of financial incentives in triggering voluntary mergers: More than 40% of the municipalities that existed in 2000 had successfully merged by 2006. Reformers in other countries and regions can learn from this example. Especially in suburban territories of local government systems that belong to the North-Middle European group (Hesse and Sharpe 1991) similar local reactions can be expected once a financial incentive is introduced.¹⁵ Moreover, the case of Fribourg demonstrates that large-scale territorial reforms are possible without compulsion from higher government tiers: it combines a Southern European reform path with a Northern European outcome (Kuhlmann and Wollmann 2014).

The present study has several limitations. First, it cannot test the underlying mechanisms of the different correlations, due to its quantitative set-up and its focus on structural factors at the municipal level. Especially the dynamics between the start of a merger and the final decision at the ballots require closer examination. To gain a more detailed picture of local merger processes and their mechanisms, a more ‘actor-centered’ view would be an interesting next step. Second, the study focuses on a specific local government system in a specific time period because the large-scale territorial reform in Fribourg offers the rare opportunity to analyze the local correlates of voluntary municipal mergers quantitatively. Identifying and analyzing additional large-scale bottom-up reforms in other local government systems is therefore an important next step.

Future research can make several contributions. To integrate structural and actor-centered perspectives, nested analysis approaches that assess the issue both quantitatively and qualitatively might be beneficial (Rohlfing 2008). Moreover, scholars can also engage in a more in-depth theorizing and exploration of potential causal pathways that explain different stages in a merger. The present binary distinction between start and end of a merger is a first proposition to be tested, altered and extended by other scholars in different contexts.

Appendix

TABLE A.1: Descriptive Statistics (Merger Attempt)

	N	MEAN	P50	P25	P75	SD	MIN	MAX
DEPENDENT VARIABLE								
Merger Attempt (=1)	237	.53	1	0	1	.50	0	1
INDEPENDENT VARIABLES								
Controls								
Number of Neighbours	237	4.81	5	4	6	1.81	1	11
Parliament (=1)	237	.04	0	0	0	.19	0	1
Fiscal stress								
Financial Capacity	237	88.41	83.50	76.79	92.97	22.23	55.96	235.51
Debt / Capita	237	-2732	-2885	-4848	-811	4569	-21447	27852
Log(Population)	237	6.15	6.08	5.52	6.79	1.05	3.87	10.36
Local Identity								
Residents > 5 years / Total Population	237	.71	.71	.66	.75	.07	.32	.88
German Municipality (=1)	237	.17	0	0	0	.38	0	1
Political Power								
Population/Average of Neighbors	237	-1.74	-1.41	-2.97	1.15	5.50	-58.51	17.42

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013).
P50=median, P25=25th percentile, P75=75th percentile, SD=Standard Deviation, MIN=Minimum, MAX=Maximum.

TABLE A.2: Descriptive Statistics (Merger Acceptance)

	N	MEAN	P50	P25	P75	SD	MIN	MAX
DEPENDENT VARIABLE								
Merger Acceptance (=1)	131	.91	1	1	1	.27	0	1
INDEPENDENT VARIABLES								
Controls								
Parliament (=1)	131	.01	0	0	0	.09	0	1
Fiscal stress								
Financial Capacity	131	81.44	79.36	73.29	88.09	11.90	55.96	122.36
Debt / Capita	131	-3136	-2720	-4753	-915	3998	-21447	5712
Log(Population)	131	5.83	5.77	5.31	6.36	.90	3.87	9.29
Local Identity								
Residents > 5 years / Total Population	131	.72	.72	.67	.76	.08	.33	.88
German Municipality (=1)	131	.07	0	0	0	.25	0	1
Political Power								
Population/Population New Municipality	131	.34	.30	.18	.49	.22	.03	.97
Amalgamating (=1)	131	.49	0	0	1	.50	0	1
Incorporating (=1)	131	.18	0	0	0	.38	0	1

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013).
P50=median, P25=25th percentile, P75=75th percentile, SD=Standard Deviation, MIN=Minimum, MAX=Maximum.

TABLE A.3: Correlation Analysis (Merger Attempt)

	Number of Neighbors	Financial Capacity	Debt / Capita	Log (Population)	Residents > 5 years / Total Population	Population / Average of Neighbors
Financial Capacity	-.018	--				
Debt / Capita	.022	.321	--			
Log(Population)	.276	.329	-.264	--		
Residents > 5 years / Total Population	.126	-.296	-.083	-.044	--	
Population / Average of Neighbors	.203	-.159	-.352	.490	.089	--

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013). Numbers are Pearson's r, N=237.

TABLE A.4: Correlation Analysis (Merger Acceptance)

	Financial Capacity	Debt / Capita	Log (Population)	Residents > 5 years / Total Population	Population / Population New Municipality
Debt / Capita	-.121	--			
Log(Population)	.582	-.153	--		
Residents > 5 years / Total Population	-.292	.033	-.113	--	
Population / Population New Municipality	.415	-.189	.715	-.165	--

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013). Numbers are Pearson's r, N=131.

Notes

¹ The exception from the Southern European reform path is Greece, where large-scale territorial reforms of local government took place in the years 1998 and 2010 (Hlepas 2010).

² Comparative studies of local government reforms normally compare countries, i.e. national levels, to each other. While this suits unitary states, for federal states this is problematic: In some cases, e.g. Switzerland, the national level is not concerned with any local legislation and the member states have full discretion on how to organize their territory: Swiss cantons are the guarantors of municipal autonomy, which makes them the relevant government level to look at (Kübler and Ladner 2003, p. 139). For these cases, one should thus investigate the member state level which can be compared to the national level in unitary states.

³ Greece being the exception (see endnote 1). There, territorial reform was conducted top-down by the respective national governments (Hlepas 2010).

⁴ The formula for calculating the payment is as follows: $\frac{400 \times \text{Population}_i}{\text{Financial Capacity}_i} = \text{Lump} - \text{Sum Payment}_i$; ($i | i \leq 1500$). See methods section for details on financial capacity.

⁵ A few other Swiss cantons also experienced large-scale territorial reforms. One of them is the canton of Ticino in Southern Switzerland: Almost half of all municipalities disappeared between 2000 and 2010 (Calciolari, Cristofoli and Macciò 2013). While generally following a bottom-up approach, some municipalities were forced to merge and the boundary changes were not entirely voluntary. Another example is the canton of Glarus, which reduced the number of its municipalities from 25 to 3 in 2011. Yet, this reform was conducted top-down. In other Swiss cantons, voluntary mergers take place as well but in a rather incremental way. Nevertheless, a slow dynamic towards more mergers is observable since the year 2000 (Kaiser 2014).

⁶ This choice obviously does not cover all dimensions of local identity and, for example, neglects more constructivist approaches to this concept (see Brubaker and Cooper 2000, p. 11-14). Yet, the focus on an individual and more psychological component and a more group-oriented and cultural component is what is possible within the limits of this quantitative study.

⁷ With the submission of the merger proposal, the merger project and the involved municipalities appear in the cantonal statistics, before they do not. This criterion ensures comparability, it is the earliest and only point in a merger process, for which comparable data is available. The second event in a merger process for which comparable data is available, is the outcome of the local referenda. Unfortunately, there's no systematic data in between these two time points that would allow for a quantitative analysis.

⁸ In principle, this distinction can also be applied to local government systems in which the decision on a voluntary merger is not subject to a referendum but is made by a local parliament or a similar representative institution.

⁹ The operationalization of the control variables is straightforward and will therefore not be discussed here.

¹⁰ Pearson's r is high or very high (> 0.9) for these indicators over a 5 year period, which means that there is no substantive variation over time.

¹¹ The variable debt / capita ranges from -21448 to +27853 CHF. Negative values mean that a municipality is indebted, while positive values mean that there are surpluses. Thus, an increase in the variable debt / capita means a *decrease* in debt.

¹² This means that the dependent variable does not vary for municipalities with parliaments: The one municipality that has a parliament and was involved in a merger also accepted it in the end. In the logistic

regression model, this leads to the exclusion of the variable because its predictive power is perfect; all municipalities with a parliament accepted a merger (although it is only one municipality).

¹³ A correlation analysis of the independent variables (see table A.4 in the appendix) shows that there is a strong positive correlation between the indicators ‘log(population)’ and ‘population / population new municipality’.

¹⁴ This suggests an interaction effect between these different variables. However, a re-estimation of the full model with different interaction effects did not yield significant results.

¹⁵ Generalization to other local government contexts is, however, limited by the specific linguistic structure of the canton of Fribourg. Therefore, the findings for the political dimension do not travel well to other contexts.

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TABLES

Table 1: The Canton of Fribourg in Comparison

	Fribourg	Swiss Cantons			
		MEAN	P50	P25	P75
Nr. of Municipalities	245	111	81	22	169
Inhabitants/Municipality	945	5594	2573	1757	4631
Area in km ²	1671	1588	873	347	1714
% Settled Area	7.3	11.2	8.0	4.9	11.9
Population	250400	285200	210395	70265	346000
Inhabitants/km ²	149.9	179.6	205.4	93.8	296.5
% Population > 64	13.1	15.8	15.8	14.5	16.8
% Urban Population	55.3	73.3	65.9	49.6	84.7
% Tertiary Education	19.7	21.5	19.0	16.8	20.8
Tax Index ¹	130.3	107.6	112.5	94.5	125.4
Debt / Capita (CHF)	4500	8900	6087	4600	8900

Note: Own Calculations. Data Source: Swiss Federal Statistical Office (2015). Data for the year 2000.

¹ Federal Tax=100.

P50=Median, P25=25th percentile, P75=75th percentile.

TABLE 2: Determinants for Merger Attempt (=1)

	Baseline Model β (p > z)	Functional Model β (p > z)	Political Model β (p > z)	Full Model β (p > z)
Constant	-.291 (.440)	6.552*** (.000)	-3.797** (.016)	4.241* (.077)
CONTROLS				
Number of Neighbors	.102 (.171)	.209** (.018)	.013 (.870)	.119 (.198)
Parliament (=1)	-2.400** (.026)	-.017 (.988)	-2.841** (.012)	-1.294 (.311)
FUNCTIONAL DETERMINANTS				
Financial Capacity		-.033*** (.004)		-.024* (.053)
Debt / Capita		-.000* (.057)		-.000 (.353)
Log(Population)		-.778*** (.000)		-.810*** (.002)
POLITICAL DETERMINANTS				
Residents > 5 years / Total Population			6.174*** (.005)	3.865 (.109)
German Municipality (=1)			-2.218*** (.000)	-1.546*** (.002)
Own Population / Average of Neighbors			.036 (.252)	.112* (.072)
N	237	237	237	237
Pseudo-R2 (McFadden)	.028	.169	.144	.230
LR Chi2	9.275***	55.330***	47.295***	75.264***
p > Chi2	.009	.000	.000	.000

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013). Coefficients are obtained from binary logistic regression with Maximum Likelihood Estimation. p-values in parentheses.

*=significant with 90% confidence, **=significant with 95% confidence, ***=significant with 99% confidence.

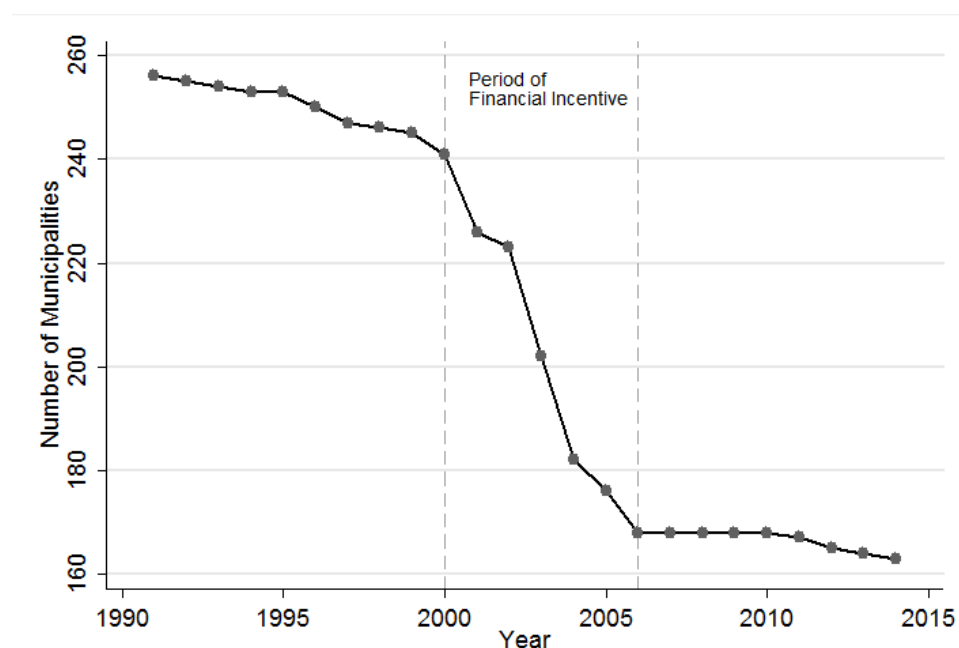
TABLE 3: Determinants for Merger Acceptance (=1)

	Functional Model β (p > z)	Political Model β (p > z)	Full Model β (p > z)
Constant	8.293*** (.001)	8.693** (.043)	26.747*** (.003)
FUNCTIONAL DETERMINANTS			
Financial Capacity	.001 (.966)		-.027 (.500)
Debt / Capita	-.000 (.678)		-.000 (.614)
Log(Population)	-1.000** (.039)		-1.657** (.016)
POLITICAL DETERMINANTS			
Residents > 5 years / Total Population		-6.119 (.256)	-15.319* (.060)
German Municipality (=1)		-.792 (.526)	-3.291 (.334)
Population / Population New Municipality		-6.013** (.017)	-4.572 (.115)
Amalgamating (=1)		-.011 (.990)	-.222 (.832)
Incorporating (=1)		3.523* (.057)	4.512** (.048)
N	131	131	131
Pseudo-R2 (McFadden)	.106	.113	.274
LR Chi2	8.036**	8.504	20.72***
p > Chi2	.045	.131	.007

Note: Own Calculations. Data Source: Department of Statistics of the Canton Fribourg (2013a, 2013b), Department of Municipalities of the Canton Fribourg (2013). Coefficients are obtained from binary logistic regression with Maximum Likelihood Estimation. p-values in parentheses.

*=significant with 90% confidence, **=significant with 95% confidence, ***=significant with 99% confidence

FIGURES

FIGURE 1: Voluntary Municipal Mergers in the Canton of Fribourg 1990-2015

Note: Own Graph; Data Source: Department of Municipalities of the Canton Fribourg (2015).

FIGURE 2: Determinants for Attempting to Merge

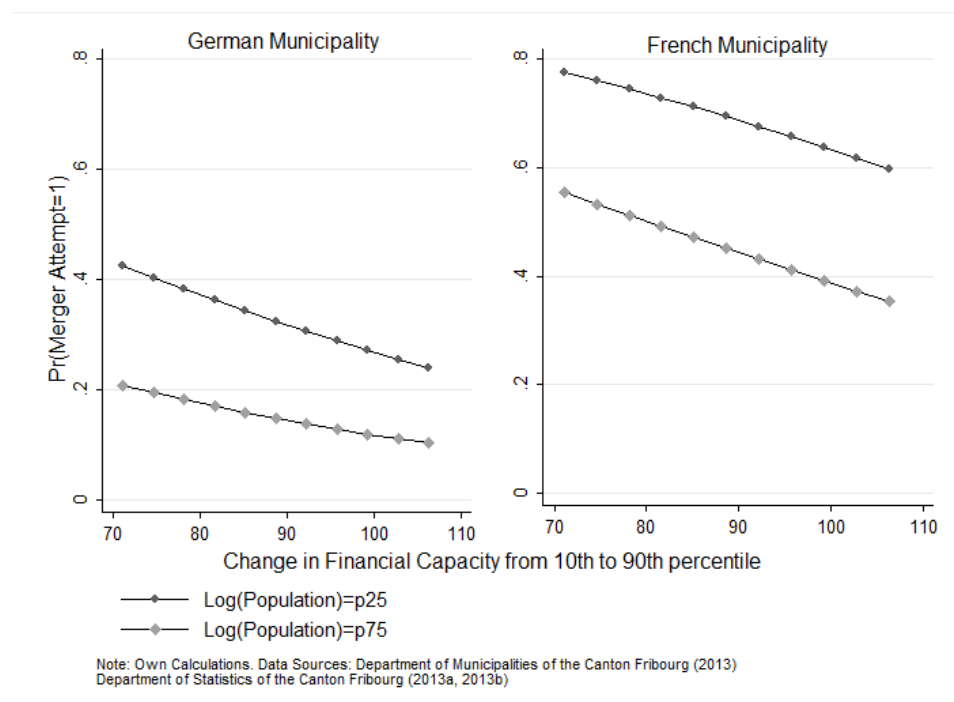


FIGURE 3: Determinants for Accepting a Merger

